



CELL LAB Mouse Anti-Chicken TCR $\alpha\beta$ (V β 2)

Cat. No.	Form	Quantity
733058	Purified (UNLB) Antibody	0.5 mg
733059	Fluorescein (FITC) Conjugate	0.5 mg
733060	Biotin (BIOT) Conjugate	0.5 mg
733061	Phycoerythrin (PE) Conjugate	0.1 mg
733062	Spectral Red™ (SPRD) Conjugate	0.1 mg

For Laboratory Use Only

DESCRIPTION

Clone:	TCR3
Isotype:	Mouse IgG1 κ
Specificity:	Chicken TCR V $\alpha\beta$ (V β 2)

Monoclonal antibody (MAb) TCR3 precipitates a CD3-associated heterodimer of Mr 88-kDa (two bands of Mr 48-kDa and 40-kDa upon reduction) on chicken peripheral blood T cells.^{1,2} Deglycosylation of the heterodimer yields two polypeptides of Mr 34-kDa and 31-kDa from TCR3 precipitates. In the chicken, two distinct subpopulations of $\alpha\beta$ T cells appear in the thymus subsequent to the appearance of $\gamma\delta$ T cells. These subpopulations, originally denoted as TCR2 and TCR3^{1,2} arise sequentially in the thymus during ontogeny and are now known to represent two distinct V β families, V β ₁ and V β ₂, respectively.³ The TCR3 MAb reacts with approximately 9% of thymocytes, 15-25% of blood mononuclear cells and 13% of splenocytes young adult chickens. Two-color immunofluorescence has revealed that the TCR3⁺ thymocytes include CD4⁺CD8⁻, CD4⁻CD8⁺, CD4⁺CD8⁺ and CD4⁻CD8⁻ subpopulations. The TCR3⁺ thymocytes can be separated into two subsets. One subset is characterized by relatively low levels of expression of the TCR3/CD3 complex and most of the cells in this subset are CD4⁺CD8⁺. Cells in the other subset express TCR3/CD3 in higher density and are either CD4⁺CD8⁻ or CD4⁻CD8⁺, corresponding to the more mature medullary subset of thymocytes. The TCR3⁺ cells in the blood and spleen express relatively high levels of the TCR3/CD3 receptor complex and are "single positive", with CD4⁺CD8⁻ cells being four times more frequent than the CD4⁻CD8⁺ cells (ca. 80% CD4⁺ vs ca. 20% CD8⁺).^{1,2}

APPLICATIONS

- Flow cytometry^{1,2}
- Immunohistochemistry (acetone-fixed, frozen sections)³
- *In ovo* suppression of the development of TCR-V β ₂ cells^{3,4}

CHARACTERIZATION

To ensure lot-to-lot consistency, each batch of product is tested to conform with characteristics of a standard reference reagent using flow cytometry.

WORKING DILUTIONS

Flow Cytometry:	FITC conjugate	≤1 $\mu\text{g}/10^6$ cells
	BIOT conjugate	≤1 $\mu\text{g}/10^6$ cells
	PE conjugate	≤0.5 $\mu\text{g}/10^6$ cells
	SPRD conjugate	≤0.2 $\mu\text{g}/10^6$ cells

Other Applications: Since applications vary, determine the optimum working dilution of the product that is appropriate for your specific needs.

HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of 100 mM borate buffered saline, pH 8.0. No preservatives or amine-containing buffer salts added.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- The phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent.
- The Spectral Red (SPRD) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent.
- Protect fluorochrome-conjugated forms from light. Do not freeze.
- Reagent is stable until the expiration date on the vial when stored at 2-8°C.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Minimize exposure of reagent to light during storage or incubation.
5. Avoid microbial contamination of reagent or erroneous results may occur.
6. Use Good Laboratory Practice (GLP) when handling this reagent.
7. Harmful if swallowed.
8. After contact with skin, wash immediately with plenty of water.
9. Contains sodium azide. Sodium azide under acidic conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, immediately wash excessively with water.

Spectral Red is a PE/CyTM5 tandem conjugate. Cy5 is for non-commercial research use only, not for therapeutic or in vivo applications. Other use needs license from Amersham Biosciences Corp., under U.S. Patent Nos. 4,981,977 and 5,268,486 and other patents pending. This material (or portions of this material) is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. There is no implied license hereunder for any commercial use. Commercial use shall include: 1) sale, lease, license or other transfer of the material or any material derived or produced from it 2) sale, lease, license or other grant of rights to use this material or any material derived or produced from it 3) use of this material to perform services for a fee for third parties. If you require a commercial license to use this material and do not have one, return this material, unopened to Beckman Coulter, Inc. 11800 SW 147 Ave. Miami, FL 33196, USA and any money paid for the material will be refunded.

TRADEMARKS

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For additional information or if damaged product is received, contact your local Beckman Coulter Representative.

REFERENCES

1. Chen CH, Sowder JT, Lahti JM, Cihak J, Losch U and Cooper MD. 1989. TCR3: a third T-cell receptor in the chicken. *Proc Natl Acad Sci USA*, 86:2351-2355.
2. Char D, Sanchez P, Chen CL, Bucy RP and Cooper MD. 1990. A third sublineage of avian T cells can be identified with a T cell receptor-3-specific antibody. *J Immunol*, 145:3547-3555.
3. Chen CH, Gobel TW, Kubota T and Cooper MD. 1994. T cell development in the chicken. *Poult Sci*, 73:1012-1018.
4. Cihak J, Losch U, Hoffmann-Fezer G, Chen CH, Cooper MD and Ziegler-Heitbrock HW. 1993. In vivo depletion of chicken T-cell subsets. *Scand J Immunol*, 38:123-129.



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